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7590
Jonathan O Owens
Haverstock & Owens LLP
162 North Wolfe Road
Sunnyvale, CA 94086

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EXAMINER

LONSBERRY, HUNTER B

ART UNIT

PAPER NUMBER

2623

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/835,991

Applicant(s)

UNGER, ROBERT A.

Examiner

Hunter B. Lonsberry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18-21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/27/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 10/10/06 have been fully considered but they are not persuasive.

Applicant argues that there is no motivation to combine Nakatsuyama, Kawaguchi and Miner (Response pages 3-5).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Nakatsuyama is relied upon to teach each element of the invention except those elements which relate to the wakeup sensor switch and receiving an external wakeup signal. In an analogous art, Kawaguchi teaches the use of a power switch coupled to the sensor. The motivation to combine is that Kawaguchi teaches the use of a receiver that ensures the reception of program information and any irregular program while saving the power consumption in the receiver (column 1, lines 49-53). Further, the newly cited Miner reference is relied upon to teach receipt of an external power on signal, and provides the benefit of

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transmitting control information through a secondary downstream bandwidth thus not effecting the bandwidth of the primary stream.

Further, Nakatsuyama and Miner are both classified in class 455.

Additionally, Nakatsuyama, Miner and Kawaguchi all teach the use of broadcast receivers. In Miner at column 14, lines 38-61, Miner teaches that DOCSIS modems may be configured to receive broadcast messages. Further Applicant admits on page 2 of the response that Nakatsuyama and Kawaguchi receive broadcast messages.

Therefore, the combination of Nakatsuyama, Kawaguchi and Miner is appropriate and teaches each and every element of the claims.

Applicant argues that Neither, Nakatsuyama, Kawaguchi, Miner nor their combination teach a wakeup sensor which sends a wakeup signal to a wakeup switch in direct response to a first selected signal. (pages 6-11).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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The Examiner notes that it is the combination of Nakatsuyama, Kawaguchi and Miner, which teach applicants invention. (See rejection of claim 1 in the body of the rejection.)

In this case, Nakatsuyama is relied upon to teach each element of the invention except those elements which relate to the wakeup sensor switch and receiving an external wakeup signal. In an analogous art, Kawaguchi teaches the use of a power switch coupled to the sensor. The motivation to combine is that Kawaguchi teaches the use of a receiver that ensures the reception of program information and any irregular program while saving the power consumption in the receiver (column 1, lines 49-53). Further, the newly cited Miner reference is relied upon to teach receipt of an external power on signal, and provides the benefit of transmitting control information through a secondary downstream bandwidth thus not effecting the bandwidth of the primary stream.

Therefore, the combination of Nakatsuyama, Kawaguchi and Miner is appropriate and teaches each and every element of the claims.

Applicant's failure to traverse the Official Notice(s) taken in the previous action is viewed as admission of prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **1-2, 4-9, 11,13-15**, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,658,231 to Nakatsuyama in view of U.S. Patent 6,271,893 to Kawaguchi and U.S. Patent 6,990,655 to Miner.

Regarding claim **1**, Nakatsuyama teaches a broadcast receiver comprising: a power supply having a power-supply output terminal (See Fig. 6 Power System 276 and Col. 13 lines 45-50) and a broadcast interface circuit including: an interface-circuit input terminal adapted to receive a plurality of broadcast communications signals, each signal modulated about a selected carrier frequency (See Fig. 6 Tuning system 252 and antenna 253 and Col. 12 lines 60-63. It is inherent that program data signals received by the antenna and the tuner must be modulated about a selected carrier frequency); a tuner having a tuner input terminal coupled to the interface circuit input terminal, wherein the tuner selects one of the signals and provides the selected signal on a tuner output terminal (See Fig. 6 Antenna 253 and Tuner System 252 See Col. 12 lines 57-67 Tuners by definition are adapted to select one of a plurality of broadcast signals and provide the selected signal to the output terminal. In this case the selected signal is the

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index signal); a wake-up sensor having a wake-up sensor input terminal coupled to the interface circuit input terminal and a sensor output terminal, wherein the sensor being adapted to produce a wake-up signal on the sensor output terminal in response to first selected signal (See Fig. 6, Tuning System 252, Logic Unit 250, Antenna 253, and Demodulator 254 and Col. 2 lines 60-65, Col. 7 lines 33-38, Col. 12 lines 57-67, Col. 14 lines 41-50. Nakatsuyama teaches that the receiver can be in low-power mode when not receiving or processing program data. It is inherent that in low-power mode some circuitry used to receive and process program data is powered off. It is inherent that the receiver must power on this circuitry to receive and process program data. The receiver powers on this circuitry based on received tuning data, which is contained in the index signal, which contains information regarding when program data is to be received. The parts of the Tuning System, Demodulator, and Logic Unit that are electronically coupled to the Antenna (Input Terminal) that receive index signal (first selected signal) and power on circuitry necessary to receive and process program data in response to tuning data are the wake-up sensor).

Nakatsuyama differs from the claimed invention in that does not disclose a wake-up switch having a wake-up-switch input terminal coupled to the power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal coupled to the wake-up-sensor output terminal to receive the wake-up signal, wherein the wake-up switch is closed in direct response to receiving the wake-up signal thereby providing power from the power-supply output terminal to the wake-up switch output terminal.

In the same field of endeavor Kawaguchi teaches a digital TV broadcast system having a wake-up switch comprising a wake-up switch input terminal coupled to a power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal coupled to the wake-up-sensor output terminal to receive the wake-up signal, wherein the wake-up switch is closed in direct response to receiving the wake-up signal thereby providing power from the power-supply output terminal to the wake-up switch output terminal (See Fig. 1 Switch 231 Power Supply 230 and Col. 4 lines 43-48). It would have been obvious to one of ordinary skill in the art to modify Nakatsuyama with Kawaguchi such that Nakatsuyama included a wake-up switch comprising a wake-up switch input terminal coupled to a power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal coupled to the wake-up-sensor output terminal to receive the wake-up signal, wherein the wake-up switch is closed in direct response to receiving the wake-up signal thereby providing power from the power-supply output terminal to the wake-up switch output terminal as taught by Kawaguchi to provide an efficient way to power up and power down the electronic circuitry associated with receiving program information (See Kawaguchi Col. 1 lines 49-53).

The combination of Nakatsuyama and Kawaguchi fails to disclose the use of a wake up signal in direct response to a first selected signal.

Miner discloses a cable system in which a remote interface unit runs in a low power standby mode and a high power active mode, in response to a wake up command received via a downstream channel, the RIU transitions from a standby mode

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to an active state in order to receive user or control information over a secondary downstream channel without adversely impacting the throughput rate of the primary downstream channel (column 4, lines 7-44).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Nakatsuyama and Kawaguchi to utilize the transmission scheme and wake up commands of Miner for the advantages of lower power consumption and reducing the amount of bandwidth needed for control commands via the primary downstream channel (column 4, lines 20-26).

Regarding claim 2, Nakatsuyama and Kawaguchi teaches the wake-up sensor further including a second tuner tuned to a carrier frequency associated with the first selected signal (See Nakatsuyama Col. 8 lines 21-22 and Col. 12 lines 57-66 One tuner is tuned to a channel to receive index data (first selected signal)).

Regarding claim 4, Nakatsuyama and Kawaguchi teaches wherein the tuner includes a power terminal coupled to the wake-up-switch output terminal (See Kawaguchi Fig. 1 Switch 231, Received Signal Processor 211, Tuner 213 and Col. 4 lines 1-3, 43-48 The Received Signal Processor which comprises the Tuner is connected to the wake-up switch output terminal).

Regarding claim 5, the modified Nakatsuyama teaches a receiver further comprising a display capable of indicating a power-on condition for the receiver (See

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Nakatsuyama Fig. 6 Display system 260 and Col. 13 lines 9-21 It is well known in the art that conventional display systems are capable of indicating their power condition i.e. whether they are off or on). Nakatsuyama fails to disclose where the display has a power input terminal connected to the power supply via a second switch. Kawaguchi does teach the display has a power input terminal coupled to the power supply via a second switch (See Kawaguchi Fig. 1 Switch 232, Output portion 212, Video and Audio Output Devices 218 and Col. 4 lines 8-12, 43-48). It would have been obvious to one of ordinary skill in the art to further modify Nakatsuyama with Kawaguchi so that Nakatsuyama's display has a power input terminal connected to the power supply via a second switch. The motivation for a second switch would have been the ability to power the display system independent of the other components.

Regarding claim 6, the modified Nakatsuyama teaches wherein power is independently delivered to the display system and the program receiving circuitry, it would have been obvious that the display does not indicate a power-on condition in response to the wake-up signal, since the wake-up signal only powers on the receiving circuitry and thus the display system would remain off and indicate such (See Kawaguchi Fig. 1 Switch 231, 232, and Col. 4 lines 38-59).

Regarding claim 7, the modified Nakatsuyama discussed in regards to claim 1, teaches a receiver further comprising a processor having a processor power terminal

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coupled to the wake-up-switch output terminal (See Kawaguchi Fig. 1 received signal processor 211 and Col. 4 lines 43-48).

Regarding claim 8, Nakatsuyama teaches a broadcast communication network comprising: broadcast head-end adapted to broadcast a plurality of signals about a corresponding plurality of carrier frequencies (See Fig. 6 and Col 2 lines 1-30), the signals including an occasional wake-up instruction (See Col. 7 lines 32-49 and Col. 12 lines 15-18 Index signal is used to wake-up receiving and processing circuitry); a plurality of receivers adapted to receive the plurality of signals (See Col. 4 lines 12-15 each end user's receiver), each receiver including: a power supply having a power-supply output terminal (See Fig. 6 Power System 276 and Col. 13 lines 45-50); and a broadcast interface circuit including: an interface-circuit input terminal adapted to receive a plurality of broadcast communications signals, each signal modulated about a selected carrier frequency (See Fig. 6 Tuning system 252 and antenna 253 and Col. 12 lines 60-63. It is inherent that program data signals received by the antenna and the tuner are modulated about a selected carrier frequency); a wake-up sensor having a sensor input terminal coupled to the interface circuit input terminal and a wake-up-sensor output terminal, wherein the wake-up sensor produces a wake-up signal on the wake-up-sensor output terminal directly in response to receiving a first selected signal (See Fig. 6, Tuning System 252, Logic Unit 250, Antenna 253, and Demodulator 254 and Col. 2 lines 60-65, Col. 7 lines 33-38, Col. 12 lines 57-67, Col. 14 lines 41-50. Nakatsuyama teaches that the receiver can be in low-power mode when not receiving

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or processing program data. It is inherent that in low-power mode some circuitry used to receive and process program data is powered off. It is inherent that the receiver must power on this circuitry to receive and process program data. The receiver powers on this circuitry based on received tuning data, which is contained in the index signal, which contains information regarding when program data is to be received. The parts of the Tuning System, Demodulator, and Logic Unit that are electronically coupled to the Antenna (Input Terminal) that receive index signal (first selected signal) and power on circuitry necessary to receive and process program data in response to tuning data are the wake-up sensor).

Nakatsuyama does not specifically teach a wake-up switch comprising a wake-up switch input terminal coupled to a power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal coupled to the wake-up-sensor output terminal to receive the wake-up signal, wherein the wake-up switch is closed in direct response to receiving the wake-up signal thereby providing power from the power-supply output terminal to the wake-up switch output terminal. In the same field of endeavor Kawaguchi teaches a digital TV broadcast system having a wake-up switch comprising a wake-up switch input terminal coupled to a power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal coupled to the wake-up-sensor output terminal to receive the wake-up signal, wherein the wake-up switch is closed in direct response to receiving the wake-up signal thereby providing power from the power-supply output terminal to the wake-up switch output terminal (See Fig. 1 Switch 231 Power Supply 230 and Col. 4 lines 43-48). Thus, it would have been

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obvious to one of ordinary skill in the art to modify Nakatsuyama with Kawaguchi such that Nakatsuyama included a wake-up switch comprising a wake-up switch input terminal coupled to a power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal coupled to the wake-up-sensor output terminal to receive the wake-up signal, wherein the wake-up switch is closed in direct response to receiving the wake-up signal thereby providing power from the power-supply output terminal to the wake-up switch output terminal as taught by Kawaguchi to provide an efficient way to power up and power down the electronic circuitry associated with receiving program information (See Kawaguchi Col. 1 lines 49-53).

The combination of Nakatsuyama and Kawaguchi fails to disclose the use of a wake up signal in direct response to a first selected signal.

Miner discloses a cable system in which a remote interface unit runs in a low power standby mode and a high power active mode, in response to a wake up command received via a downstream channel, the RIU transitions from a standby mode to an active state in order to receive user or control information over a secondary downstream channel without adversely impacting the throughput rate of the primary downstream channel (column 4, lines 7-44).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Nakatsuyama and Kawaguchi to utilize the transmission scheme and wake up commands of Miner for the advantages of lower power consumption and reducing the amount of bandwidth needed for control commands via the primary downstream channel (column 4; lines 20-26).

Regarding claim **9**, the modified Nakatsuyama teaches the wake-up sensor further including a second tuner tuned to a carrier frequency associated with the first selected signal (See Nakatsuyama Col. 8 lines 21-22 and Col. 12 lines 57-66).

Regarding claim **11**, the modified Nakatsuyama teaches the interface circuit including a second tuner having a tuner input terminal coupled to the interface input terminal, wherein the second tuner is adapted to select one of the signals and provide the selected signal on a tuner output terminal (See Nakatsuyama, Fig. 6 Antenna 253 and Tuner System 252 and Col. 12 lines 60-63; the electrical coupling is the input and output terminals);

Regarding claim **13**, the modified Nakatsuyama teaches wherein the second tuner includes a power terminal coupled to the wake-up-switch output terminal (See Kawaguchi Fig. 1 Switch 231, Received Signal Processor 211, Tuner 213 and Col. 4 lines 1-3, 43-48 The Received Signal Processor which comprises the Tuner is connected to the wake-up switch output terminal).

Regarding claim **14**, the modified Nakatsuyama teaches a receiver further comprising a display capable of indicating a power-on condition for the receiver (See Nakatsuyama Fig. 6 Display system 260 and Col. 13 lines 9-21. It is inherent that conventional display systems are capable of indicating a power condition i.e. whether

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they are off or on). Nakatsuyama fails to disclose where the display has a power input terminal connected to the power supply via a second switch. Kawaguchi does teach the display (Fig.1, Video/Audio Output Device 218) has a power input terminal coupled to the power supply (230) via a second switch. (See Kawaguchi Fig. 1 Switch 232 and 212 Output portion). It would have been obvious to one of ordinary skill in the art to further modify Nakatsuyama with Kawaguchi so that Nakatsuyama's display had a power input terminal connected to the power supply via a second switch. The motivation for a second switch would have been the ability to power the display system independent of the other components.

Regarding claim **15**, in the modified Nakatsuyama where power is independently delivered to the display system and the program receiving circuitry, it would have been obvious that the display does not indicate a power-on condition in response to the wake-up signal, since the wake-up signal only powers on the receiving circuitry and thus the display system would remain off and indicate such (See Kawaguchi Fig. 1 Switch 231, 232, and Col. 4 lines 38-59).

3. Claims **16** and **18-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,271,893 to Kawaguchi et al. in view of U.S. Patent 6,054,981 to Kimoto et al and U.S. Patent 6,690,0655 to Miner.

Regarding claim **16**, Kawaguchi teaches a method of reducing power usage in a broadcast receiver (See Col. 8 lines 2-5), the method comprising: monitoring, in a standby mode (See Col. 4 lines 38-43 when only the controller, I/O devices and the IF are powered, the receiver is in standby mode), a user-input device for a power-on instruction (See Col. 4 lines 24-34 I/O devices 227, it is inherent that controlling the digital receiver would include a powering-on instruction); monitoring the user-input device for a power-off instruction (See Col. 4 lines 24-34 I/O devices 227, it is inherent that controlling the digital receiver would include a powering-off instruction); and monitoring, with the receiver in the standby condition, a broadcast communication channel for a wake-up instruction (See Fig. 1 Second transmission media 5, Communication IF 228, Switch 231 Col. 4 lines 34-59 and Fig. 9 Step 444 Turn on the switch 231 and Col. 8 lines 25-30 turning on the switch 231 wakes-up the receiver) and providing power to a first portion including a control processor of the receiver in direct response to receiving the wake-up instruction (See Fig. 9 Col. 8 lines 25-33).

Kawaguchi does not specifically disclose indicating a power-on condition for the receiver in response to the power-on instruction or indicating a standby condition for the receiver in response to the power-off instruction or indicating a standby condition for the receiver while receiving a receiver update, in direct response to receiving the wake-up instruction, nor providing power to a first portion including a control processor. However, Kawaguchi's does teach an indicator (See Col. 7 lines 37-40) and indicating various power modes for an electronic device is well known in the art as taught in Kimoto (See Fig 3. and Col. 4 lines 37-42).

It would have been obvious to one of ordinary skill in the art to modify Kawaguchi with Kimoto to indicate a power-on condition for the receiver in response to the power-on instruction or indicate a standby condition for the receiver in response to the power-off instruction, or indicate a standby condition for the receiver while receiving a receiver update, in direct response to receiving the wake-up instruction, as well as indicating the appropriate power mode of the receiver at any given time during the receiver's operation. The motivation for such a modification would have been so that the various power modes could be displayed.

Miner discloses that in response to a wakeup command, a receiver goes into a full power mode in order to receive maintenance messages , establish resynchronization, and status messages via an active mode processor 407 (column 11, lines 2-23column 13, line 47-column 14, line 37, figures 4/7) the wake up message is received via a secondary downstream channel without adversely impacting the throughput rate of the primary downstream channel (column 4, lines 7-44).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Nakatsuyama and Kimoto to utilize the transmission scheme and wake up commands to wake up the control processor of Miner for the advantages of lower power consumption and reducing the amount of bandwidth needed for control commands via the primary downstream channel (column 4, lines 20-26).

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Regarding claim **18**, the modified Kawaguchi teaches upon receipt of a power-on instruction in the standby condition providing power to the first portion and a second portion of the receiver (See Col. 4 lines 58-59 when both switches are closed first portion discussed with regards to claim 17 and output portion 212 are powered) and indicating the power-on condition (See discussion regarding claim 16).

Regarding claim **19**, the modified Kawaguchi further teaches indicating a power-on includes providing a video signal to a video display device (See Col. 4 line 8-12 It is inherent that a video signal is provided to a video display device in response to a power-on instruction).

Regarding claim **20**, the modified Kawaguchi further teaches a user input device (See Fig. 1 I/O devices 227 and Col. 4 lines 24-33). Kawaguchi and Kimoto do not explicitly state that the user interface device comprises an infrared receiver. The examiner takes Official Notice that a user interface device comprising an infrared receiver is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify Kawaguchi, Kimoto and Miner so that its interface device comprises an infrared receiver. The motivation for such a modification would have been the ability to control the receiver remotely.

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4. Claims **3**, **10**, **12** rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,271,893 to Kawaguchi et al. in view of U.S. Patent 6,054,981, and further in view of U.S. Patent publication 2002/0073423 to Krakirian.

Regarding claims **3** and **10**, Nakatsuyama as modified by Kawaguchi and Miner teaches the broadcast signals are already digitized when the receiver receives them (See Abstract). Nakatsuyama does not include a digitizer in his receiver. However, analog broadcast systems with receivers that include analog tuners and digitizers where the digitizer is coupled between the tuner and an output that requires a digital input are well known in the art as disclosed in Krakirian (See Fig. 1 A/D Converter 16 and Paragraph 31).

In light of the teaching from Krakirian, it would have been obvious to one of ordinary skill in the art to further modify Nakatsuyama, Kawaguchi and Miner such that it includes a digitizer coupled between the tuner and the wake-up-switch control. The motivation of such a modification would have been having a receiver capable of receiving an analog signal that can communicate with digital circuitry.

Regarding claim **12**, Nakatsuyama as modified by Kawaguchi teaches a processor (See Fig. 6 Logic Unit 250 and Col. 12 57-60). Nakatsuyama teaches the broadcast signals are already digitized when the receiver receives them (See Abstract). Nakatsuyama does not include a digitizer in his receiver. However, analog broadcast systems with receivers that include analog tuners and digitizers where the digitizer is

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coupled between the tuner and a processor well known in the art as disclosed in Krakirian (See Fig. 1 16 A/D converter and Paragraphs 30 and 31). In light of the teaching in Krakirian, it would have been obvious to one of ordinary skill in the art to further modify Nakatsuyama, Kawaguchi and Miner such that it includes a digitizer coupled between the tuner and the processor. The motivation of such a modification would have been having a receiver capable of receiving an analog signal that can communicate with digital circuitry.

5. Claims **21 and 23**, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,271,893 to Kawaguchi in view of U.S. Patent 6,990,655 to Miner.

Regarding claim **21**, Kawaguchi teaches a broadcast receiver (See Fig. 1 TV receiver 4) comprising: means for monitoring a user-input device for a power-on instruction (See Fig. 1 I/O Devices 227, Controller 225, Switches 231 and 232, and Col. 4 lines 24-58 The Controller monitors the I/O devices for user command to execute. The Controller executes powering on the receiver by closing Switches 231 and 232. It is inherent that the I/O device must include power-on instructions so that the user can power-on the receiver to view channels); display means for indicating a power-on condition for the receiver in response to the power-on instruction (See Fig. 1 Switches 231 and 232, Video & Audio Output Devices 218 and Col. 4 lines 1-12, 38-59. Power-on condition is when both switches are closed. Power off condition is when switch 232 is open. It is inherent that the Video Output Device will display an image when

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powered-on.); means for monitoring the user-input device for a power-off instruction (See Fig. 1 I/O Devices 227, Controller 225, Switches 231 and 232, and Col. 4 lines 24-58. The Controller monitors the I/O devices for user command to execute. The Controller powers off the receiver by opening Switches 231 and 232. It is inherent I/O device must include power-off instructions so that the user can power-off the receiver); means responsive to the power-off instruction for indicating a power-off condition for the receiver (See Fig. 1 Video & Audio Output devices 218 and Col. 4 lines 1-12. It is inherent that Video Output Device will not display an image when powered-off); and means for monitoring a broadcast communication channel for a wake-up instruction with the receiver in the power-off condition, wherein the means for monitoring the broadcast communication channel includes a power switch for providing power to a control processor in direct response to the wake-up instruction (See Fig. 1 Communication IF 228, Controller 225, Signal processor 211, and Switches 231 and 232 Fig. 9 Col. 4 lines 24-58, Col. 8 lines 25-33 The Controller monitors the Communication IF for interrupt. Interrupt (Wake-up) instruction closes Switch 231, which provides power to Processor 211).

Kawaguchi fails to disclose providing power to a control processor in response to the wake up instruction.

Miner discloses that in response to a wakeup command, a receiver goes into a full power mode in order to receive maintenance messages , establish resynchronization, and status messages via an active mode processor 407 (column 11, lines 2-23column 13, line 47-column 14, line 37, figures 4/7) the wake up message is

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received via a secondary downstream channel without adversely impacting the throughput rate of the primary downstream channel (column 4, lines 7-44).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Nakatsuyama and Kimoto to utilize the transmission scheme and wake up commands to wake up the control processor of Miner for the advantages of lower power consumption and reducing the amount of bandwidth needed for control commands via the primary downstream channel (column 4, lines 20-26).

Regarding claim **23**, Kawaguchi further teaches wherein the display means indicates the power-off condition when the power switch provides power to the processor in response to the wake-up instruction (See Kawaguchi Fig. 1 Switch 231, 232, Video & Audio Output Devices 218, and Col. 4 lines 38-59. Wake-up condition only closes switch 231, thus Processor 211 is powered on and Video & Audio Output Devices are still powered off. Video Output Device not displaying an image is powered off).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hunter B. Lonsberry whose telephone number is 571-272-7298. The examiner can normally be reached on Monday-Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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HBL



Hunter B. Lonsberg

Patent Examiner

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